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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,689	02/07/2001	Ji Hyun Hwang	MRE-08	3330

7590 05/31/2002

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EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 05/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/777,689	HWANG ET AL.
	Examiner	Art Unit
	Judson H Jones	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extension of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_ is/are allowed.

6) Claim(s) 1,4 and 5 is/are rejected.

7) Claim(s) 2, 3 and 6 is/are objected to.

8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: ____ .

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, Applicant recites "a stator" with "a first temperature sensor," "a heat sink," and "a cooling fan" installed on the upper surface of "an X-axis and a Y-axis linear motors." Since there are two linear motors, there have to be at least two stators, two movers, two first temperature sensors, two heat sinks and two cooling fans. In line 10 of the claim, "the mover" is unclear because there is an X mover and a Y mover. Also in lines 5 and 10 this should be an X-axis and a Y-axis linear motor (instead of motors).

In claims 4 and 5 Applicant recites operating at least one mover in claim 4 line 3 and recites operating a mover in claim 5 line 3. In lines 6 and 7 of claim 4 and lines 8 and 9 of claim 5 "an X-axis and a Y-axis movers ..." are mentioned and Applicant goes on to recite measuring the temperatures of both movers in both claims. If only one mover is being operated, then the temperature of the other mover appears to have no relevance to the method for controlling cooling. Clarification is required.

Claim 4 is also objected to because it contains reference numerals not in parenthesis in the last three lines of the claim.

### ***Allowable Subject Matter***

Claims 1, 4 and 5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 2, 3 and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or teach an apparatus for controlling cooling of a gantry with stators for X-axis and Y-axis linear motors having first sensors, movers for the X-axis and Y-axis motors having second sensors in combination with an encoder, an encoder periphery sensor, an A/D converter, a D/V converter and a mover driver. Miura et al. teaches the problem addressed by the instant invention (see column 1 lines 25-31) and proposes a solution different from the one proposed by Applicant (see column 1 lines 44-57). Hazelton et al. mentions in column 7 lines 38 and 39 the amount of heat produced by the coils of a motor but does not mention the significantly smaller amount of heat produced by the permanent magnets. In column 9 lines 27-51 Hazelton et al. discusses a method of keeping the heat generated by the coils 422 from affecting the magnet plate 452. Fradella teaches another solution to eddy current flow and heat in column 7 lines 20-37. None of the prior art references of record teach placing temperature sensors on both the fixed and movable parts of a linear motor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ   
May 29, 2002

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800